

WHAT IS CLAIMED IS:

1 1. A fuel cell arrangement comprising several individual components
2 arranged in a stack, the individual components comprising at least two
3 stacked plates which are at least partially joined to one another by a
4 common seal element of polymer material which is injected onto the plates
5 to form a module.

1 2. The fuel cell arrangement according to Claim 1, wherein the stack
2 of plates has oppositely facing main surfaces, and wherein the seal element
3 is provided on the main surfaces of the stack.

1 3. The fuel cell arrangement according to Claim 1, wherein the at
2 least two plates are positioned immediately adjacent one another with an
3 intermediate space provided between the adjacent plates, the seal element
4 sealing the intermediate space.

1 4. The fuel cell arrangement according to Claim 1, wherein the at
2 least two plates have end faces, the seal element encompassing at least
3 portions of the end faces of the at least two plates.

1 5. The fuel cell arrangement according to Claim 1, wherein each of
2 the at least two plates is provided with an opening, the seal element
3 extending through the opening in each of the at least two plates.

1 6. A module for a fuel cell arrangement comprising a plurality of
2 stacked plates forming a stack, at least two of the plates having a common
3 seal element of polymer material which is injected onto the plates and by
4 which the at least two plates are at least partially joined to one another.

1 7. The module according to Claim 6, wherein the seal element
2 adhesively joins the at least two plates to one another.

1 8. The module according to Claim 6, wherein the at least two plates
2 are joined to one another in an interlocking manner via the seal element.

1 9. The module according to Claim 6, wherein the stack of plates has
2 oppositely facing main surfaces, and wherein the seal element is provided
3 on the main surfaces of the stack.

1 10. The module according to Claim 6, wherein the at least two plates
2 are positioned immediately adjacent one another with an intermediate space
3 provided between the adjacent plates, the seal element sealing the
4 intermediate space.

1 11. The module according to Claim 6, wherein the at least two plates
2 have end faces, the seal element at least in areas encompassing the end
3 faces of the at least two plates.

1 12. The module according to Claim 6, wherein the seal element
2 extends through at least one opening provided in each of the at least two
3 plates.

1 13. The module according to Claim 6, wherein the at least two plates
2 are positioned immediately adjacent one another, with each of the adjacent
3 plates possessing a plurality of elongated openings, each of the openings in
4 one of the plates overlapping one of the openings in the other plate.

1 14. The module according to Claim 6, wherein the at least two plates
2 are positioned immediately adjacent one another, the seal element
3 extending in at least one cavity provided between the adjacent plates.

1 15. The module according to Claim 14, further comprising a hole
2 provided in at least one of the adjacent plates, the hole communicating with
3 the cavity.

1 16. The module according to Claim 6, wherein a part of the seal
2 element located on a side of one of the plates has a cross-sectional
3 configuration possessing a flat surface.

1 17. The module according to Claim 6, wherein a part of the seal
2 element located on a side of one of the plates has a cross-sectional
3 configuration possessing a tapering surface.

1 18. The module according to Claim 6, wherein a part of the seal
2 element located on a side of one of the plates has a cross-sectional
3 configuration possessing both a flat surface and a tapering surface.

1 19. The module according to Claim 18, wherein the flat surface is
2 separated from the tapering surface by a recess which is recessed relative
3 to the flat surface.

- 1 20. A process for producing a module for a fuel cell arrangement,
- 2 comprising:
- 3 inserting at least portions of two plates into a casting mold; and
- 4 filling the casting mold with a polymer seal material so that the seal
- 5 material adjoins the two plates.